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Naturalist Notes

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IN THE FALL --- DID YOU EVER

Did you ever ... watch an autumn leaf
... float gently to the ground

Did you ever ... observe how quietly
... nature paints her autumn scene

Did you ever ... notice the silence of the forest
... in the crisp air of fall

Did you ever ... scuffle through the fallen leaves
... and thrill to the rustling sound

Did you ever ... smell the acrid tang of burning leaves
... and watch the blue smoke ... drift
beyond the tree tops

Did you ever ... touch the damp moss
... and see the dew drops glisten

Did you ever ... want to share
... these things with others

Why don't you?

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Naturalist Notes

PREFACE

The Interpretive Naturalist is often the most important contact the forest visitor will make during a forest visit--the person most likely to be remembered. Through the trained eyes of a naturalist, the visitor begins to understand and enjoy the complex and fascinating world of the forest environment.

The naturalist's objective is to stimulate interest and appreciation for the natural and human history of the area. Because of the visitor's limited time and varied background, it is difficult to provide a meaningful interpretive program. The following notes compiled from a cross section of Forest Naturalists, should be helpful aids for orienting new naturalists and critiqueing programs.

The thoughts and ideas presented are closely related to the principles presented by Freeman Tilden in his book Interpreting Our Heritage. This close correlation indicates the popularity of the book as a guiding light for enthusiastic naturalists. Mr. Tilden's interpretive principles, observations, and comments, written in an interpretive style, provide inspiration and guidance for educators and naturalists.

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EXPERIMENT STATION

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THE VISITOR

Each naturalist must analyze the visitor and determine the interpretive style that will relate to the visitor's background, experience, beliefs, and desires.

Each visitor has a different background and interest that cannot be changed. Every naturalist can develop the ability to adjust to a variety of visitors. A few general assumptions can be made for a better understanding of visitor groups.

Visitors may be generally divided into four groups: the individual, family, tour, and organized groups.

Organized Groups usually have some common denominator of interest, age, background, education, or profession. This common denominator will provide clues to help the naturalist orient his interpretive program. Often the naturalist has advance information about an organized group that provides planning time to develop a specific interest program. For example, a group of sixth graders may be culminating a study unit on plant succession. The naturalist program would be an on-the-ground discussion of the phenomena, with ample opportunity for the class to explore what they learned in the classroom.

Another organized group might be a garden club only interested in wild flowers. The naturalist should be able to relate wild flowers to the more familiar garden variety of the same species or family. Wild flower walks can be further developed around medical use, history, and legend that provides a new insight to the understanding and appreciation of the flora.

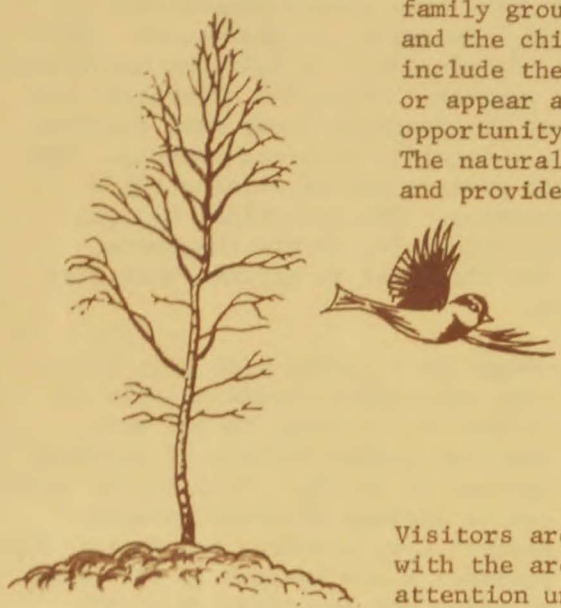
A wildlife group could be shown the effects of deer browsing on plantations and initiate a discussion of possible solutions for the problem.

Researchers have found that visitors retain more of the message when seated. One or two stops along a guided walk can have a few logs or seats for longer messages.

Tour Groups usually have some common interest of age, religion, or profession. This semi-organized group is usually limited in time, interested in the features of the area, but appreciative of any small item of unusual interest that will make their brief visit a memorable experience. The romantic legend and the geologic origin of Multnomah Falls is usually of more interest and often remembered longer than the mundane numbers indicating the height and width of the falls.

Families and Individuals offer the greatest challenge and reward for the naturalist. These visitors have usually stopped because of their personal interest or curiosity. They are eager to learn more about the area, providing it is an entertaining and recreational pursuit.

The naturalist is faced with two opposing factions in the family group. The adults do not want to be talked down to, and the children do not want lectures. The naturalist must include the children without making the parent an outsider or appear as a dummy. The family vacation should be an opportunity for the parents and children to share experiences. The naturalists can introduce new experiences to the family and provide pathways for family exploration.



ORIENTATION

Visitors are primarily interested in becoming acquainted with the area. Any interpretation will gain only passing attention until the visitor has found out about his basic needs of food and lodging. Once the camp or headquarters has been established, the family will have time and interest to explore the area.

The common query is usually about what there is to do and see in the area. In answer to these questions the naturalist should be well informed within a day's travel time of his work area. Experience in a particular area will provide a list of questions unique to the area. In general, a naturalist should be familiar with travel routes, distances, travel time, points of interest, and current recreation information such as hunting, fishing, hiking, camping, picnicking, and seasonal recreation activities, as well as special points of interest along each route of travel.

Experienced naturalists have found that a discussion of a visitor's recreation interests often leads to many opportunities for interpretation. To be successful the naturalist must be a good listener. Information gained from one visitor can be shared with another. This relay of information gives the naturalist a broader base of information than he is able to cover personally.

A naturalist that can report on a trail he has traveled, a view enjoyed, a wildlife sighted, or a very special experience worthy of sharing, will be able to make the information more interesting and meaningful.

Any information relayed must be accurate or thoroughly qualified if received from another source.

A discussion of the visitor's recreation pursuits will develop clues to the underlying and often obscure interests of the visitor. Recognition of these clues provides the naturalist an opportunity to introduce new interests for the visitor to discover or explore.

A naturalist should be intimately acquainted with recreation opportunities, interpretive features, and special interest areas within his sphere of activity. One day's travel is a good rule of thumb to determine the radius of information required to adequately orient the visitor.

Displays are effective tools for orientation. Areas requiring seasonal information should have displays designed with a section that can be easily changed. The alert naturalist will plan changes in advance to make his information display effective.

Printed brochures and leaflets are proven tools for orientation and interpretation. Once the brochure is printed it should not be considered that the job is finished. Printed material is useful when presented in the proper context. Overpowering racks loaded with many brochures tend to confuse the visitor. Simple brochure racks pertaining to the immediate area are more apt to fulfill the wants of the visitor. If additional information is required, the visitor will ask.

Bulletin boards can be used, but they usually degenerate into an out-of-date cluttered jumble of ignored material. A well-organized bulletin board can easily become an attractive display.

Every person working in an area should be cognizant of the informational needs of the visitor and take action to accommodate these needs by the most efficient method.

THE INTERPRETIVE STORY

As a naturalist you will be given a specific assignment. This assignment is a part of the overall interpretive program for the area. Each interpretive area has a unique quality that makes it worthy of interpretation. To successfully interpret each area, a primary theme must be selected. Every interpretive activity within the area should be designed to expand and illustrate the primary theme.

Often a naturalist will be asked to prepare material without objectives and goals clearly understood. In order to make a worthwhile contribution the naturalist should review some of the past history of the interpretive area.

The interpretive area plan with the supporting research material and references will give the naturalist an understanding of the interpretive goals and objectives. Further discussion with other naturalists and the area director should bring the area theme, goals, and objectives into proper perspective. It is each naturalist's responsibility to continue to probe until these aspects of his assignment are abundantly clear.

Determine which of the area objectives you wish to achieve through the program you plan to develop. Select the basic concept you wish to present that will help you achieve your objective. Determine a program theme to provide a thread to weave and tie your thoughts together into a complete story.

Keep in mind your program is a part of the whole. Your program must be a complete thought, but to be meaningful, it will support the theme of the interpretive area.

To illustrate the process: Your objective is to reduce wilderness littering and clean-up costs. The concept you want to leave with the visitor is "Everything that man does creates an impact on the environment." You select the theme, "The Beauty of Wilderness Travel." Using this theme, you show the wilderness traveler the things of beauty he can discover in the wilderness, and what he can do to preserve it by not leaving evidence of his passage.

Programs oriented around the local area provide many opportunities to develop an awareness of local problems, such as litter or vandalism. As stated in the Park Service

Administrative Manual: "Through interpretation, understanding; through understanding, appreciation; through appreciation, protection." We will not achieve cooperation in our campaign to reduce littering and vandalism until we make people aware of the fact that "they" do the littering,..."It can't always be the other person."

One type of litterer you may wish to orient your program toward is the person who litters unconsciously: the person who unthinkingly drops his litter along the trail or leaves the campsite littered. Focusing attention to this kind of litterer gives the opportunity to ask for assistance and cooperation. Soliciting cooperation to solve a common problem casts the audience in the role of the hero rather than the villain.

PREPARATION AND PRACTICE

Every program, regardless of type of setting requires ample presentation time and practice for proficiency and comfort. Many communicators have stated it takes an hour of preparation for each minute of presentation. Each presentation should be critiqued by others for content and format. A good presentation is often reworked several times.

After a talk is prepared it requires practice until the naturalist is completely at ease with the message and the delivery. The talk must be delivered in complete sincerity as a part of yourself.

You, the naturalist, must be committed to the program. Your material must be factual as well as entertaining. You must stress the interesting points of every subject you interpret and give your guests the best.

Select your material and approach to develop your program and achieve your objectives, while retaining the interest of the visitor. Your program should be entertaining and the subject relevant.

Time is an important factor in program planning. Each area presents a different time factor. Recreation sites at road ends have a different time element than similar sites along a through highway. Consideration of average length of stay and the arrival and departure times will help determine program scheduling to accommodate the most visitors.

Time available for interpretation varies for each visitor and each interest. A program offering a variety of short subjects at various times of the day permits the visitor to select the interest subject when time is available. Programs are for the interest of the visitor at a time he can enjoy them.

The best campground programs or demonstrations usually do not exceed 20 minutes with a five or ten minute introduction and closing, averaging about 30 minutes. Walks and tours should be developed so that each stop is very short. The message should be short and lively and to the point, and then move on. Walks should be planned to accommodate the time schedule of most visitors, but normally not to exceed one hour.

Hikes of longer duration lasting up to four or five hours are successful in many areas. Usually this type of interpretive activity is scheduled well in advance to create interest in a special featured activity. Hikes require very careful planning to accomplish desired objectives.

INTERPRETIVE PROGRAMS

There are several types of naturalist programs that have special problems of presentation. Advance planning and preparation will help to solve many of the problems.

Campfire or Evening Program

Arrive early and check out all equipment. Be sure projectors are focused, centered on the screen, and in good working condition. Check the public address system for volume adjustment before any guests arrive. Last minute adjustments appear inefficient and often disturb the mood of the audience.

Last minute adjustments are often interrupted by a visitor's question, resulting in a faulty adjustment that can be disastrous later in the program.

Greet visitors as they enter the campfire circle. If the mosquitos are out in force, greet visitors with a can of insect repellent to use. Standing at the entrance gives a stiff and formal appearance. Mingle with the crowd to help put people at ease and make them feel welcome.

Until dark, relax visitors by a casual, informal manner. Show an interest in individuals. Ask questions--where they come from, if they have had a chance to see some particularly interesting feature in the area, what have they enjoyed. Give the visitors a chance to talk.

Group singing is one effective method to develop group camaraderie. Songs requiring group action such as standing or clapping at certain times are very enjoyable, especially to children. Five or ten minutes of singing are usually enough. Check out the mood of the crowd and stop short of what is enough.

Many naturalists do not feel comfortable in any type of group singing. Unless the person is completely relaxed and enjoys group singing, it should not be attempted.

Regardless of the method used, the moments before darkness can be the most rewarding for naturalist and visitor. These are moments to share little experiences and suggest new discoveries for the next day. It is a quiet time in a person's mood where a brief one-to-one relationship is easily attained.

At the start of the program, the introduction should be lively and brief. Introduce yourself, describe what there is to see and do in the area. Suggest a variety of activities for those who will stay and those who will be traveling. Make your suggestions brief, followed by an announcement that you will be happy to give further details after the program, for those interested.

One way to find out if people are listening, is to suggest a point of interest for exploration on the next day. Visit the place yourself and see how many you encounter from last night's program. Suggestions are effective methods of directing visitor use patterns.

Evening programs should be kept brief and provide time for visiting after the program. Normally a program can be planned for 15 to 20 minutes with a five to ten minute opener and closer. The entire program should be no longer than 45 minutes. After 30 minutes people begin to get restless and are certainly restless after 45 minutes, depending upon the chill and the seat.

Closing the program is very important. Make the transition from the interpretive story to the cold glare of exit lights a slow dissolve. Various methods have been used to soften the transition. Leaving the closing slide on the screen as

the exit lights are gradually turned up is a simple transition. Using a scenic slide with a closing statement such as,--enjoy the National Forests, or Give a Hoot, Don't Pollute, left on for a few minutes after the program provides a good transition.

If litter bags are a part of the program, save them until the end. Invite the audience to come up to the campfire and get a litter bag. This encourages the hesitant visitor to come forward and talk about the program and other interests.

Adding more fuel to the campfire making it flare up signifies the formal program is over. The brighter fire invites the visitor to come up and enjoy a visit by the fire. In any event, harsh lights in the campfire area should be avoided at the close of the program.

Putting out the campfire and putting the equipment away is as important a ritual as the opening. Walking away and leaving the glowing embers of a campfire, even in a safe situation is very difficult to explain to the fans of Smokey Bear. Careless dumping of equipment into the back of a pickup or being unusually noisy in closing up the area will spoil the effect of a perfect program.

Guided Walks offer the best opportunities for audience involvement. Through involvement, the visitor begins to understand and appreciate many new facets of the forest environment. Through the trained eye of the naturalist new visions are opened for the visitor to explore and appreciate.

Guided walks are not just a happenstance discussion of a variety of things, but a well-planned adventure. Each guided walk should be carefully planned; each stop adding a new chapter to the story, each interpretive feature a visual aid or picture to illustrate your story. Each stop should be carefully selected to support your theme. The walk should end with a conclusion to your interpretive story.

A guided walk story theme involving plant succession or fire rehabilitation can become more meaningful than a simple plant identification exercise. Yet a story theme can utilize plant identification.

The naturalist that portrays the friendly image of the story teller will gain more interest than the image of the educator or authoritarian. Some naturalists have a tendency to "boss" and to "talk down" to visitors. Naturalists can avoid authoritarianism by remembering that they are hosts who are trying to help others discover for themselves. Be willing to share your experiences with your guests.

People are only as interested as the naturalist is. Some naturalists tend to concentrate on projecting their personalities, instead of their knowledge. They are not doing their homework to accumulate the knowledge visitors are seeking.

A continual study effort led to outstanding success for one naturalist. He studied one subject (among others) very intently until he was intimate with its history. He then conducted a walking tour in the location of his human history subject--and projected his appreciation for this interesting subject to his visitors. They caught his enthusiasm and walked away delighted.

Groups of 10 to 20 people are usually optimum, but larger groups can be handled by an experienced leader or by using one or two assistants. The size of the group depends upon several factors: the kind of trail, age of the group, weather, and interpretive features. Narrow, single file trails limit the size of the crowd to the carrying distance of the leaders voice. Windy ridges and pounding surfs or other factors that cause interferences will limit the size of the audience. Every visitor on the walk must be able to hear and see, or they are being cheated.

Stops should be planned in sheltered areas with space for everyone to participate. Portable sound equipment can be used, but will detract from the personal rapport you are striving to achieve.

A friendly, informal atmosphere should be established with the introductory remarks. The introduction remarks should include your personal introduction, how the walk will be conducted, time it will take, and type of terrain. To encourage rapport, the naturalist can ask questions of the visitors such as: how many are local, staying in the campground, or who lives the farthest away.

As the introductions are made, a casual observance of shoes and clothing should be made to make sure everyone is properly shod and clothed for comfort and safety of the planned walk.

Enlist visitor cooperation in proper use and care of the area. Include comments regarding cross cutting switchbacks, staying on the trail to protect fragile areas, collecting of samples, and assisting in litter cleanup, etc. Keep your comments in the cooperative tone rather than the authoritative.

Take advantage of opportunities, such as: "Careless hikers caused this damage by cutting across this switchback," Thoughtless sampling caused the death of this moss patch, etc.

Actions speak louder than words--pass out a few litter bags and set the example by picking up litter yourself. Make a few comments about the full litter bags of your helpers.

At the end of the walk, provide a summary of the walk and an invitation to enjoy more of the area. Offer assistance for travel, recreation, or other information required. A small memento such as a litter bag for the car or a travel brochure for other points of interest are accepted with pleasure.

Guest programs offer many opportunities for community involvement in the interpretive program.

Demonstrations provide an excellent method of illustration. Having a person demonstrate the use of an article and explain its origin and history is more meaningful than viewing the article on display. To be effective, the demonstration should relate to the interpretive theme of the area. As an example, a demonstration about adobe bricks would not be appropriate in the Cascade Mountains of northern Washington, nor would the use of the froe to split cedar shakes be appropriate in Tucson, Arizona.

Often the best talents for demonstrations are found in the volunteer groups. People who have developed hobbies or have had actual experience with old crafts have the enthusiasm and knowledge to interest many visitors.

Many naturalists have developed the art of demonstration and find that they are always in popular demand.

Artists, wood carvers, and sculptors create interest and, properly handled, will add to the interpretive theme of the area.

Vista points offer each visitor a different experience. Interpretation should not intrude on the visitor's privacy.

Point of Interest

Points of interest such as vista points and overlooks create a special problem for a naturalist who wants to develop a rapport with viewers. Many visitors, as they gaze at a magnificent view, tend to isolate themselves in thought and feeling for a full appreciation of the view. The naturalist must be sensitive to this tendency and be sure not to interrupt the visitor's experience. At such locations the

naturalist must be sensitive also to those visitors who do not seem to want to be alone, but instead seem to want to share their experience and to learn more about the scene they are viewing.

Usually the visitor tends to linger a little longer at a vista point and often has several questions pertaining to origin, history, or legend of the vista. The alert naturalist will be able to discern the interest by conversations of the group, actual questions, expressions, or remarks. A naturalist can usually make his contact with a group by quietly inserting an answer into a group's wondering comments.

In whatever manner the naturalist develops his opening remarks, his message should be brief and entertaining. If the visitors congregate and continue to ask questions, the naturalist can consider the encounter a success. If people walk away or partially ignore the naturalist, the approach should be changed or possibly the place does not require interpretation and the naturalist is a negative rather than a positive element.

Morning and Afternoon Programs

Mornings and afternoons offer opportunities for special programs. To insure the success of these odd time programs, the recreation life style of the area must be determined. For example, the recreation visitors at an area are predominantly retired couples. A casual survey of their recreation pattern reveals a period of time when the wife is doing small chores around the campsite and the husband is putting in time until they are ready to start on the afternoon recreation activities.

Only slight inducement will be necessary to gain participation of the husbands in a subject of their interest. For example, if the interest of the area is collection of rock samples or "rock hounding," a discussion of the geological formation that creates various rock specimens and where these specimens are found would be interesting. While telling of the geological features, carefully inserted messages can be included such as--digging on private land is against the law, watch the signs, undermining trees caused several accidents last year, excavation holes cause erosion, fill your divots--these litter bags are for your convenience and our assistance, bring 'em back full.

Another campground has a recreation activity that leaves a lot of young people asking, "What's to do?" In this instance the naturalists started a program of historic demonstrations. An old-time prospector was encouraged to give gold panning demonstrations in the afternoon, on a volunteer basis. The demonstration was the incentive, the attraction. Gradually

questions generated, where do you find gold, where do you look for gold, how can we find gold, why aren't there more prospectors today? Self-generated questions create involvement, and involvement opens the doorway to discussion of local problems and methods of personal commitment toward correction, especially littering or personal pollution. These are the elements that a naturalist strives to achieve to project his program to a receptive audience and gain action to reduce people problems.

Guest Programs

Every naturalist should consider ways of enlarging the scope of the interpretive program. One naturalist can only cover a limited area and talk to a small percentage of the visitors. Naturalists can expand the scope of their programs through other knowledgeable people. Many people are interested in the interpretive field, and some are experts in their field. They are anxious and willing to share their experiences with others.

Setting up a schedule of "Guest Programs" allows the naturalist to expand the interpretive program to many more people. Guest programs not only add interest for the visitor, but allows more time for the naturalist to plan programs. As an example to further illustrate the guest program, the naturalist might have developed the following schedule.

Weekly Guest Program

Local people have volunteered their time to share special interests and talents with you. The following schedule will help you plan your time to take part in the guest program.

Monday, a.m.

A Bird Watch with Jack Doe

Mr. Doe is a member of the Audubon Society and an authority on the winged wildlife of the high desert country.

The Bird Watch will be along the east bank of the Deschutes River. The early morning walk often provides excellent lighting for wildlife and scenic photography.

Tuesday, 5 p.m.

Lava Lands in Relief

Mr. Photo will lead you along the edge of the lava flow and talk about the light factors to consider in afternoon photography of the lava formations.

Mr. Photo is a member of the "Lava Lands Photo Club," a group organized to help you obtain the best in photography at Lava Lands.

Wednesday, 3 p.m.
Exploration of the "Deer Pantry" with Jack Goodfellow, retired wildlife naturalist.

Mr. Goodfellow, a member of the State Wildlife Service, will illustrate the problems of maintaining a deer habitat with increasing people use.

Thursday, 8 p.m.
Star Watch with Dr. Longfellow, Director of Moon Mountain Observatory. Recognize the common galaxies and learn about the ancient legends and their place in history.

Friday, 4 p.m.
Fly Casting with Joe Fisher
Mr. Fisher will demonstrate his casting technique that won the State Fly Casting championship. Joe is always ready to talk about favorite fishing spots along Big River.

Saturday, 8 a.m.
Backpacking with Jim Long
Jim Long will share some of the backpacking tips he picked up on his hike of the Pacific Crest Trail from Mexico to Canada.

Sunday, 6 a.m.
Sunrise Service
Pastor John Brown and the Unity Church Choir offer a memorable service as the early glow of the morning sun paints the snow-crested peaks of the Cascades.

INVOLVEMENT

Freeman Tilden stated "The chief aim of Interpretation is not instruction but provocation." He expanded his thought by continuing..."the purpose of interpretation is to stimulate the reader or hearer toward a desire to widen his horizon of interests and knowledge, and to gain an understanding of the greater truths that lie behind any statement of fact."

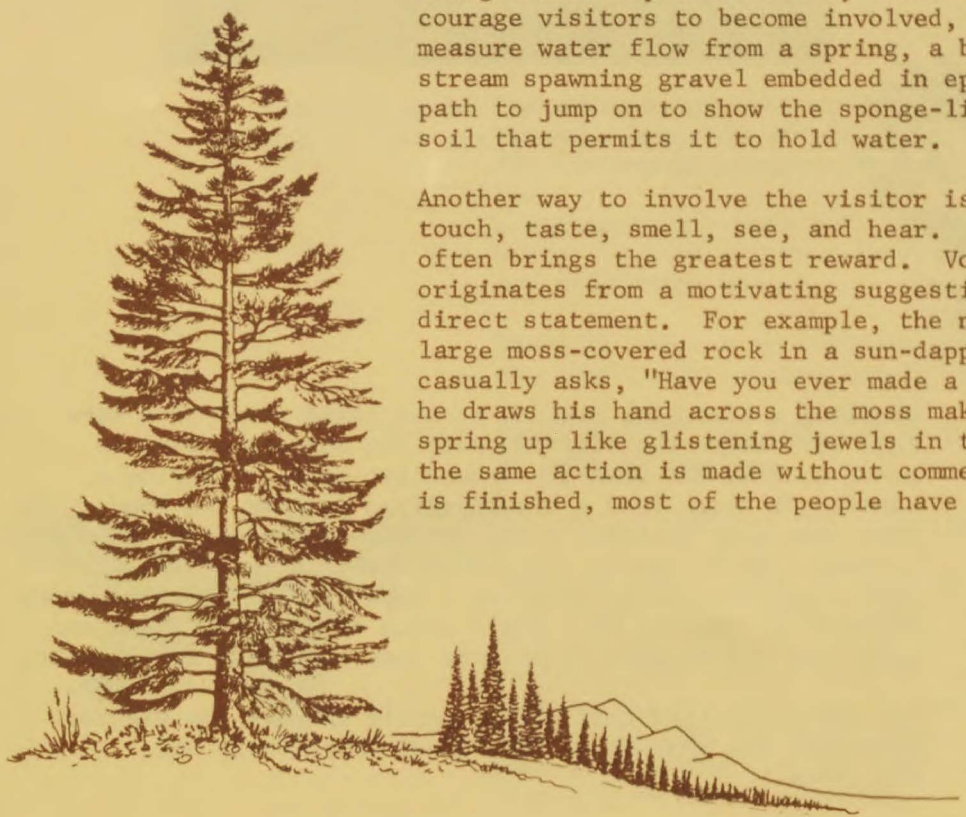
Provocation can be developed through involvement. Involvement can be obtained in many ways. One method is to invite the visitor to discover for himself. Develop interpretive aids that spark the imagination and stimulate curiosity. Provide increment borers and let the visitors determine the age of a tree and interpret a little of its historical record as shown by the growth rings.

Introduce the visitor to a log grading plot with sample trees and test trees. Invite them to test their skill as a log grader. Log grading develops an awareness of the individual tree rather than a total forest. From log grading the naturalist can talk about spacing for growth, natural pruning, regeneration, and other silvicultural practices.

Provide the criteria, let them observe and share their impressions. Expose them to phenomena from which they can make inductions and deductions in a fun way. Give them some manual and intellectual tools that can be used to learn for themselves.

Along one interpretive trail, there are devices which encourage visitors to become involved, such as a pail to measure water flow from a spring, a block of wood with stream spawning gravel embedded in epoxy, and a section of path to jump on to show the sponge-like qualities of the soil that permits it to hold water.

Another way to involve the visitor is to encourage him to touch, taste, smell, see, and hear. Voluntary involvement often brings the greatest reward. Voluntary involvement originates from a motivating suggestion rather than a direct statement. For example, the naturalist passes a large moss-covered rock in a sun-dappled ravine. He casually asks, "Have you ever made a dewdrop glisten?", as he draws his hand across the moss making beads of moisture spring up like glistening jewels in the sunlight. Later the same action is made without comment. Before the walk is finished, most of the people have made a dewdrop glisten.



Did you ever see a dewdrop glisten? Provocative suggestions tend to develop involvement.

Striking a listening posture at the faint sound of a bird call will cause the visitor, with the untrained ear, to pause to find out what the naturalist hears. Cupping a handful of water from a clear spring, passing the hand over glacially polished rock, bending to inspect a lichen-covered rock or gently cupping a flower to enjoy the delicate scent, carefully avoiding a beautiful patch of blooming flowers, or picking up a small piece of litter. These and many more are suggestive motions that encourage involvement.

Arrange activities that will directly involve the visitor. Encourage the sharing of individual experiences and reactions.

As the introductions are made, a casual observance of shoes and clothing should be made to make sure everyone is properly shod and clothed for comfort and safety of the planned walk.

Enlist visitor cooperation in proper use and care of the area. Include comments regarding cross cutting switchbacks, staying on the trail to protect fragile areas, collecting of samples, and assisting in litter cleanup, etc. Keep your comments in the cooperative tone rather than the authoritative.

Take advantage of opportunities, such as: "Careless hikers caused this damage by cutting across this switchback," Thoughtless sampling caused the death of this moss patch, etc.

Actions speak louder than words--pass out a few litter bags and set the example by picking up litter yourself. Make a few comments about the full litter bags of your helpers.

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Guest programs offer many opportunities for community involvement in the interpretive program.

INTERPRETIVE AIDS

Many naturalists use interpretive aids to help illustrate their story. Aids provide an easy system to involve people and provide a change of pace for the program. Successful aids should be carefully stored for future use. A diary, outlining use of the aids and audience reaction, should be kept to help improve the program.

A small packsack will accommodate the few selected interpretive aids needed for your walk. Depending upon the interpretive story planned, a variety of aids are easily obtained. The following are examples that have been used, but only a few at a time.

Small hand lens - ideal for many types of interpretation and invites instant audience involvement.

Increment borer - determining the comparitive age of trees, discussion of annual growth rings, and use of the instrument add involvement to your discussion.

Diameter tape - used with or without the increment borer. A good aid to illustrate difference in growth and estimating volume.

One-foot ruler - to estimate tree heights or lay out one-foot-square ground sample plots.

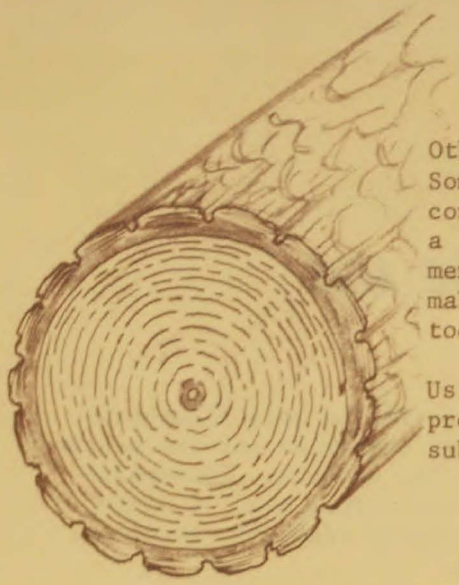
Small aquatic sampling net or tea strainer - to scoop up aquatic samples.

Small hand mirror - for pointing out distant objects.

Straight pins - used to make floral pins or other type lapel pins. Take a small bud, seed pod, small cone or cone bracket, mount on a straight pin and fasten to the lapel. Used to stress a point this tree is our greatest producer of lumber; our state tree; used by Indians for bows; these pods were used by your grandmother, as hat band decorations, etc. A simple involvement exercise.

Small jar of fish eggs - to drop in a clear stream to lure trout to strike.

Plaster of paris - for taking impressions.



Other visual aids can be cached along the trail in advance. Some items used by other naturalists included: a large conk specimen; large piece of bark with bark beetle galleries; a large cross section of a log; a 1"X1"X12" board; an assortment of pine cones; several rock samples; a small shovel to make new cuts on a soil profile pit; tree planting hoe; fire tools and backpack can; fuel moisture sticks.

Using visual and interpretive aids adds interest to the presentation and gives the audience new interest in your subject--but don't overdo it.

Trail signs can be used as visual aids for guided walks.

TELL IT LIKE IT IS

One purpose of the interpretive program is to develop awareness of the forest resources, and the problems encountered in the management for "the greatest good for the greatest number", for the present and the future. There is a tendency for seasonal naturalists to superficially discuss the forest resources in a sentence or two, because of limited knowledge on the subject. As a result, the message sounds like a "footnote" or afterthought. Each naturalist should find out about the organization, understand the policies and objectives, and be able to speak confidently on the subject.

Review the reference library, study your orientation manual, look over past records, ask for orientation tours. There are many interesting ways to learn about your organization. Take field trips and ask questions of resource managers. Understand their problems and appreciate their part of the organization.

Develop pride in your organization and its management objectives. Pride in your organization is readily discerned and respected. Lack of pride manifested in attitude and remarks is also quickly recognized and interest in you as a naturalist (or an authority) wanes.

Management activities such as methods of harvesting, brush control, insect and disease control programs, wildlife habitat management, reforestation, and fire management should be explained to the visitor, when visitors bring up these topics. Often a naturalist can help a resource manager by explaining local management problems in appropriate interpretive programs.

Naturalists should be alert to management problems and suggest ways that they can help resource managers interpret the management problem.

ACTION WORDS

Sharing.....the desire to communicate your feelings, interests, and enjoyment with others.

Stimulate.....the objective of interpretation should stimulate curiosity rather than satiate the visitor's interest.

Simplicity.....develop one idea with a meaningful conclusion.

Time.....consider the time a visitor has to spend; consider the time span for an effective program; allow the visitor time to explore the elements of your program; start on time--quit on time.

Relativity.....relate to things or actions within the scope of the visitor's experience.

Involvement.....encourage the use of all the senses to appreciate the various aspects of the forest environment.

Listen.....how can you develop an understanding of your visitor's interest unless you listen--to his desires, interests, experiences, and questions.

Query or Question..Dr. J. Allen Wagar's research indicates that direct questions to test people or require a direct response, tend to cause people to withdraw. A query or type of question that indicates "let's explore this together" stimulates interest and encourages involvement.

Exploration.....encourage further exploration through stimulation of ideas and suggestions.

Enjoyment.....if you don't enjoy meeting and talking to people you should be in another type of work.

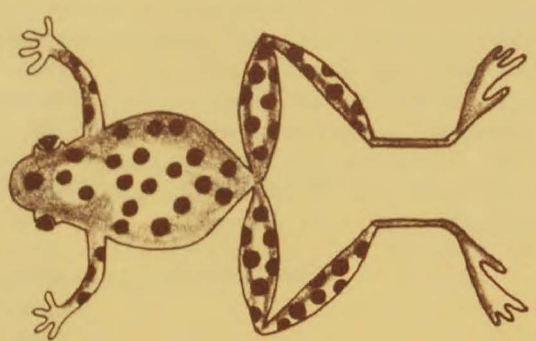
Enthusiasm.....your interest and enthusiasm will help stimulate the interest of your audience.

Public awareness..publicize your programs so people can plan their schedules to gain the most from your area.

Reward.....the pleasant feeling you gain when you have presented a satisfactory program with lots of involvement by the visitors, or often a bashful thank you from a young child.

Critique.....I will analyze each program and strive to improve my presentation to give the best to my audience. I will ask my colleagues for innovative ideas and productive advice.

Host.....every naturalist should think in terms of being a good host.



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Appendix

Tips for Effective Use of Slide and Movie Projectors

by

Cape Perpetua Visitor Center

Siuslaw National Forest

VIS Training Course

April 19, 1972

Make yourself a projector accessory kit. Order an attache case from GSA and stock it with the following equipment:

Movie Projector Kit

*Instruction booklet for the projector

*Extension cord

*3 to 2 prong adapter

*Take-up reel (it probably won't fit inside, so drill a hole through side of case and fasten reel to outside with a small bolt and wing nut)

*Spare projector lamp

*Spare exciter lamp

*Lens cleaning tissue

*Small Phillips screwdriver (for changing exciter on Kodak Pageant)

Bottle of film cleaner (for cleaning film on rewinding)

1 square foot of velvet (to put film cleaner on)

Bottle of alcohol or lighter fluid (for cleaning projector)

Pipe cleaners (for cleaning film gate)

Soft rag like a diaper (for cleaning other projector parts)

Kodak Presstape splicer and tapes

Microphone (most modern projectors can be used as public address systems)

*These are the real necessities; don't be without them.

Slide Projector Kit

Projector extension cord

Instruction booklet

3 to 2 prong adapter

Remote control unit

Remote control extension cord

Lens cleaning tissue and fluid

Spare projector lamp

Pointer flashlight

Coin for removing a stuck carousel

Common Mistakes in Slide Programs and How to Correct Them

Mistake	How to Correct it
1. Blank spaces filled with brilliant white projector light.	1. a. Use black slide (or 2x2 cardboard) b. or depress manual light cover on right side of late model projectors c. or hold hand over front of lens.
2. Dirty, dusty slides.	2. Clean with lens tissue and film cleaner, or dust with lens brush or "Static Master" slide brush.
3. Apologizing at start of program ("You'll have to put up with me and my bad slides")	3. Be prepared with good talk and good slides. Don't apologize at start; your audience will wonder what you're doing up there.
4. Disappointing ending ("I guess that's all I have to say")	4. Close with a good summary statement and a "Thank you all for coming."
5. Always referring to a slide as "Here you see", or "This slide shows.."	5. Let your narration flow like a story and time slide appearance to coincide.
6. Dirty projector lenses.	6. Clean all lenses (internal as well) with tissue and cleaner.
7. Washed out or faded slides.	7. Retake another original, get duplicates made of often used slides.
8. Upside down or backward slides.	8. Put dot in lower left corner of slide; it will always appear on upper right when in carousel.
9. Slides out of focus, or continual focusing necessary	9. Slides must be put in carousel with emulsion facing same way, usually all away from light bulb. Focus once for a point in center of seating arrangement.
10. Vertical slides off screen.	10. Usually best to omit verticals from program; if you can't, align verticals to fill screen first.
11. Slides not horizontal, or keystoning (larger at top than bottom).	11. Level projector, adjust screen perpendicular to projector; adjust projector higher to same level with screen.

Mistake	How to Correct it
12. Slides with the important feature too far in the background (elk a half mile away); then apologizing to people in back of room because they can't see it.	12. Use a closer picture so all can see.
13. Looking at screen, with back frequently to audience.	13. Know where you are in your narration-slide sequence. If necessary, mount small mirror on podium facing screen.
14. Waving pointer flashlight around room, across audience, ceiling, etc.	14. Point flashlight at screen, turn it on, then off before moving away.
15. Tapping screen with pointer, causing it to ripple.	15. Don't touch screen.
16. Too many slides showing about the same thing (you took the whole roll--now show it!)	16. Illustrate your point with a few of the best.
17. Too few slides to adequately cover the narration; drone on and on with same slide on screen.	17. Try to illustrate each major point; make changes often.
18. Always waiting for next slide to come on before talking about it; too many pauses.	18. Keep the story going; your hand on the remote can work independently of your mouth.
19. Flashing through the slides too fast.	19. Allow a minimum of 6-7 seconds for your <u>fastest</u> change.
20. Injecting personal opinion about subject when speaking "officially" (ex. "Although I'm personally opposed to the decision made about this area..")	20. Leave opposing personal opinion out when speaking publicly. (Use it in-service as your convictions dictate).
21. Slide jams, causing carousel to stick.	21. Have a coin ready to release carousel. Check for bent slides before program.
22. Can't identify something else person might ask about in slide (what's that flower, bird, where was it taken, when, etc.)	22. Save some possible embarrassment if you can find out before hand; it may increase your credibility with group.

REHEARSE REHEARSE REHEARSE REHEARSE

General Points Pertaining to Projectors and Programs

1. If you don't have an instruction booklet for your particular machine, get one. Study it carefully and follow the maintenance schedule.

2. Check your equipment and accessories before you leave; make yourself a checklist.

3. Practice changing lamps, threading, splicing, releasing carousels, and be very familiar with all sound controls, framer, etc.

4. Arrive for the program early enough to arrange seating, set up equipment, thread projector, level it, check sound, focus, etc. Know where the lights turn off. Leave first slide in projector to avoid white lighted screen.

5. When audience arrives, ask someone to turn off lights when you're ready and show them where the switch is. If you want someone to turn on your projector, show them what to do and have them tell you back.

6. If you're using a film, introduce it carefully by suggesting points to watch for, or by telling, where parts were taken, purpose for showing it, etc. But don't summarize film before they see it.

7. At the end of the film, discuss it briefly (if audience is not too large). After discussion you might summarize the message you hoped the film got across.

8. During a slide talk it is nice to have a small light (like a podium light) on your face so you can maintain some eye contact.

9. You can use some gestures even in a semi-dark room. People's eyes will travel back and forth from the screen to you.

10. Voice modulation and sound effects are great in a slide talk.

11. To lay out your script use two column headings like this:

Oregon Coast Geology

Narration	Visual
1/ Tonight, I will unfold for you some of the geologic history of the spectacular scenery you see as you travel the Oregon Coast. 2/ The geologic record of our coast tells the story of advancing and retreating oceans, and or great volcanic activity. Nature has written these secrets in layers of 3/	1/ Title slide 2/ Aerial of coast 3/ Lava flow extending into ocean.

Sharing is the keynote of

INTERPRETATION